



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/699,591	10/31/2003	Douglas C. Allan	CRNG.047	2625

7590

08/24/2005

VOLENTINE FRANCOS, P.L.L.C.

Suite 150

12200 Sunrise Valley Drive

Reston, VA 20191

EXAMINER

CABRERA, ZOILA E

ART UNIT

PAPER NUMBER

2125

DATE MAILED: 08/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/699,591

Applicant(s)

ALLAN ET AL.

Examiner

Zoila E. Cabrera

Art Unit

2125

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 31 October 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 10/31/03.
- 4) ☐ Interview Summary (PTO-413),  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

11

## DETAILED ACTION

### *Claim Rejections - 35 USC § 101*

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 14-22 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The steps of claims 14-22 consist solely of mathematical operations without practical application in the technological arts or simply manipulates abstract ideas without practical application in the technological arts.

Please note that the language of claim 14-22 is directed merely to an abstract idea that is not tied to a technological art, environment, or machine which would result in a practical application producing a concrete, useful, and tangible result to form the basis of statutory subject matter under 35 U.S.C. 101. Merely setting or determining values is too preliminary to permit one of ordinary skill to realize any usefulness in the technological arts.

Please amend claim 14 to properly recite that the computer is used for determining the steps recited. "providing a computer" does not necessarily means that the computer is used to determine the parameters and thereby modify them. A computer can be placed with a program and not necessarily use such computer as the claims are recited.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 7, 13 are rejected under 35 U.S.C. 102(b) as being anticipated by **DeBoynton (US 6,304,383)** the subsequent thermal processing includes forming at least one semiconductor layer over the glass material ( Col. 4, lines 59-67).

3).

As for claim 1, **DeBoynton** discloses a method of determining parameters of plurality of thermal cycles to achieve a set glass strain level (Abstract), the method comprising:

providing a plurality of input parameters for a glass substrate and a plurality of parameters for a plurality of thermal cycles (Fig. 5, element 248; Col. 7, lines 59- Col. 8, line 4); and providing a computer which is adapted to iteratively modify at least one of the plurality of thermal cycle parameters so the glass strain is not greater than the set glass strain level after a final thermal cycle is completed (Fig. 5, element 186, 286; Abstract; Col. 2, line 62 - Col. 3, line 36; Col. 7, lines 43-49).

7. A method as recited in claim 1, wherein the set glass strain level is a compaction level (Col. 5, lines 1-10 and lines 26-29).

13. A method as recited in claim 1, wherein the parameters are pairs of time and temperature (Col. 8, lines 57-62; Col. 8, lines 30-38), please note that time and temperature parameters are needed for thermal control).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over

**DeBoynton (US 6,304,383)** in view of **Bocko (US 5,597,395)**.

DeBoynton discloses the limitations of claim 1 and further discloses the limitations of claim 6, the subsequent thermal processing includes forming at least one semiconductor layer over the glass material ( Col. 4, lines 59-67). But DeBoynton fails to disclose the limitations of claims 2-5. However, Bocko discloses such limitations as follows:

2. A method as recited in claim 1, wherein the iterative modifying includes providing a penalty function, which provides constraints on allowed temperature variations, heating and cooling rates, hold times, and durations of the plurality of thermal cycles (Col. 4, lines 17-35; Col. 5, lines 39-43).

3. A method as recited in claim 1, wherein the input parameters include parameters from the manufacturing thermal history of a glass material (Col. 6,

lines 63-65).

4. A method as recited in claim 3, wherein the input parameters includes parameters for a subsequent thermal processing sequence (Col. 6, lines 63-67).

5. A method as recited in claim 4, wherein the input parameters include a single choice of time and temperature for the manufacturing thermal history and the subsequent thermal processing (Col. 6, lines 63-67).

Therefore, it would have been obvious to a person of the ordinary skill in the art at the time the invention was made to combine the teachings of **DeBoynton** with **Bocko** because it would provide an improved control system for precompacting glass, particularly glass sheets with minimal damage to the glass sheet during the precompaction process (Col. 2, lines 40-45; Col. 1, lines 10-14).

4. Claims 8-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over **DeBoynton (US 6,304,383)**.

As for claims 8-11, **DeBoynton** discloses the limitations of claims 1 and 7 above. **DeBoynton** further discloses the limitations of claim 12, all of the plurality of parameters is iteratively modified (Col. 8, lines 57-62). However, **DeBoynton** fails to disclose compaction magnitudes not exceeding approximately 10 ppm or ranges of approximately 0 ppm and -10 ppm; the glass strain is less than approximately 10ppm;

Art Unit: 2125

and plurality of parameters is in the range of approximately  $10^{3.3}$  to approximately  $10^{6.6}$ .

However, absent any evidence of criticality or unexpected results, such magnitudes and ranges are believed to represent an obvious matter of design choice to one of ordinary skill in the art. Therefore, it would have been obvious to a person of the ordinary skill in the art at the time the invention was made to have used such magnitudes and ranges during the experimentation of compaction process of glasses.

#### ***Allowable Subject Matter***

5. Claims 14-22 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 101.

The following is a statement of reasons for the indication of allowable subject matter: The allowability of the claims resides, at least in part, that the closest prior art of record **DeBoynton et al. (US 6,304,383)** does not disclose or suggest, alone or in combination, the steps of:

As for independent claim 14, **e) calculating a value of viscosity at a current temperature and a current fictive temperature; f) calculating a change in the fictive temperature for a given change in time; g) updating a set of data including the current temperature, the current time and storing these data; h) determining if the current time from step g) is set final time, and if not repeating steps e) through h) , and if so, termination the method**, in combination with the other elements and features of the claimed invention.

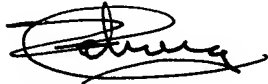
Art Unit: 2125

**Conclusion**

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning communication or earlier communication from the examiner should be directed to Zoila Cabrera, whose telephone number is (571) 272-3738. The examiner can normally be reached on M-F from 8:00 a.m. to 5:30 p.m. EST (every other Friday).

If attempts to reach the examiner by phone fail, the examiner's supervisor, Leo Picard, can be reached on (571) 272-3749. Additionally, the fax phones for Art Unit 2125 are (703) 872-9306. Any inquiry of a general nature or relating to the status of this application should be directed to the group receptionist at (703) 305-9600.



Zoila Cabrera  
Patent Examiner  
8/20/05